

New Secretary General Appointed at PERSGA

PERSGA is delighted to announce that Prof. Dr. Abdelelah Abdulaziz Banajah has been appointed as the new Secretary General of the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden - PERSGA.

The selection was announced in Jeddah at the Seventh PERSGA Council Meeting with unanimous support from the Council members. He officially commenced his duties on Saturday 11 October 2003. PERSGA and the countries of the Region extend to him the warmest of welcomes.

The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) announced the appointment of Professor Abdelelah Abdul Aziz Banajah as its new Secretary General.

During the Seventh PERSGA Council Meeting, the Members announced their full support for Dr. Banajah.

The new Secretary General was warmly welcomed by the employees of PERSGA, as well as the member governments of the countries surrounding the Red Sea and Gulf of Aden. Dr. Banajah commenced his responsibilities on Saturday, October 11, 2003.

Dr. Banajah Profile:

- * Born in Jeddah, Saudi Arabia on 1.1.1367 H, corresponding to 15.11.1947 G.
- * Graduated with a Bachelor's degree in Science from Riyadh University (King Saud) in 1970.
- * Received his Ph.D. in Philosophy of Biology from Dundee University, Scotland, 1976.
- * Worked as a teacher at Al-Falah Secondary school in Jeddah; and as a staff member at the Biology Department in King Abdul Aziz University, Jeddah.
- * Appointed as a trustee of King Abdul Aziz University and then as Deputy Manager.
- * Appointed a member of the Shoura Council of the Kingdom of Saudi Arabia for the period October 7, 1993 to May 25, 2001.
- * Awarded the position and title of Professor in 1986.
- * Published several scientific research papers and books; supervised Master's and Doctoral degrees, and participated in judging research work, papers and promotions.
- * Member of several scientific and administrative committees.
- * Participated and led many scientific conferences and seminars, locally and internationally.

Al Sanbouk Editorial

The release of the 19th issue of Al Sanbouk coincides with the successful completion of a five year period of uninterrupted work (1998-2003) by dedicated PERSGA staff towards the protection of the environment of the Red Sea and Gulf of Aden. It marks the end point of a period during which PERSGA spared no effort to convert aspirations of progress and development in the Region into reality, and to help in protecting the environment and its natural resources for the welfare of future generations. PERSGA, with its seven member countries, completed the core activities of the SAP (Strategic Action Programme) by the end of 2003. The SAP took five years of continuous work and was supported by the GEF implementing agencies (UNDP, UNEP and World Bank) and the Islamic Development Bank.

Following the foundation of PERSGA in 1995, preparations for the SAP took three years. It was officially signed in December 1998 by PERSGA, the member countries, the GEF implementing agencies (UNDP, UNEP and World Bank) and the Islamic Development Bank. The purpose of the SAP has been to assist PERSGA in realizing its main goal: conservation of the marine and coastal environments in the Region. The Programme has been implemented through a series of preventive and curative procedures, and included continuous consultation and cooperation between PERSGA and the member countries, and the tireless support of the GEF implementing agencies.

The Programme dealt with issues related to the enhancement of regional cooperation and coordination, minimizing the risks of navigation and marine pollution, wise use and management of living marine resources, the creation of a regional network of marine protected areas, support for integrated management of coastal areas, and raising awareness of and participation in local environmental management.

The SAP has contributed towards the realisation of PERSGA's goals, and helped to build its technical and administrative capabilities, as well as its national and international contacts. The Programme has also helped in the exchange of information and experiences within the region, and supported the process of developing and implementing the legislative and constitutional procedures that will support sound environmental practices.

PERSGA participated in the preparation of revised navigation charts that show new vessel traffic routes approved by the International Marine Organization. These routes will reduce the risk of marine accidents and pollution. Two regional research and training centres have been set up and operate in Aden and Jeddah. The two centres will specialise in the management of living marine resources, giving training on stock assessments with particular attention to sharks. PERSGA has led the preparation of regional action plans to protect natural habitats and species such as mangroves, coral reefs, birds and marine turtles; the preparation of plans for integrated management of coastal areas in countries that lack such plans; and the preparation of community projects in countries of the Region to engage people in marine environmental protection work. You will find details of such achievements in this issue.

PERSGA has been highly successful, thanks to the cooperative efforts of all participants. Now PERSGA has created a new vision and will move forward into the future building on its past achievements to reach new horizons using the experience and capabilities within the Region and through effective partnerships with the member countries.

Needless to say that the above-mentioned successes would have never been realized without great teamwork. From the beginning of the Strategic Action Programme the team at PERSGA was led by Dr. Nizar bin Ibrahim Tawfiq, may Allah rest him in peace. He spared no effort to obtain the necessary international funding for the SAP's implementation. His passing was certainly a great loss for PERSGA.

The completion of the SAP may be considered as a turning point. Based upon our capabilities, support from the member countries and attraction of additional international funding, we will consolidate our achievements and move forward exploring the future within the framework of our past success.

PERSGA has prepared a paper for discussion, titled '*Action Framework and Visions of PERSGA for the post-SAP Period: Activities Continuation, Continuous Development, and Integrated Conservation of the Red Sea and Gulf of Aden*'. The paper takes into consideration global, regional and national objectives and has been forwarded to member countries for their consultation. The paper will become one of the main pillars of PERSGA's future strategy in the forthcoming period. Concurrently, preparations are underway for an international conference for donors and global organizations, at which PERSGA will showcase its strategy and programmes in order to attract resources and funds to support environmental activities in the member countries.

We beseech God to make our hopes come true, and to help us in realizing our aspirations.

Prof. Abdelelah A. Banajah
Secretary General

PERSGA Activities

Council Meeting

Task Force Meeting

The seventh SAP Task Force Meeting was held in Jeddah from 16-17 December 2003. The meeting was attended by representatives from the PERSGA Member Countries (with the exception of Somalia), from the World Bank (Washington), UNDP (Riyadh), and from the Islamic Development Bank. Dr. Banajah (Secretary General) opened the meeting and welcomed the guests to PERSGA and to the Kingdom of Saudi Arabia. He acknowledged the outstanding work of the late Dr. Nizar Tawfiq, his role as one of the primary initiators of the SAP and the guidance he gave during its execution. A brief review of the achievements of the SAP over the past year was presented by the Lead Specialists before serious consideration was given to the topics of SAP sustainability, the mobilization of future financial resources, and the final Programme evaluation. A set of recommendations from the Meeting was prepared before the delegates returned home.

Joint MPA / HBC Working Group Meeting

A joint working group meeting for the two SAP components 'Marine Protected Areas' and 'Habitat and Biodiversity Conservation' was held in Jeddah, 12-13 October 2003. The achievements made throughout the PERSGA region were celebrated.

A number of recommendations were made, to be considered by PERSGA in its future sustainability strategy:

- 1) A steering committee consisting of MPA focal points and led by a regional coordinator should be convened.
- 2) The exchange of experience, skills and lessons learned from the Demonstration Projects should be encouraged.
- 3) National surveys to monitor the status of key species and key habitats should be conducted in accordance with PERSGA Standard Survey Methods. It is recommended that surveys are carried out every two years both in the regional MPAs and at other important sites in accordance with the Workplan discussed and approved during the meeting.
- 4) Appropriate follow-up should be made on the necessary steps for the successful implementation of the site-specific MPA master plans that were developed through the SAP.
- 5) Donor funding should be pursued in order to cover costs of the regional and national activities for the implementation of MPA management plans and the surveys of critical habitats and species.

A Special workshop on ICZM

Workshop on Marine and Coastal Environmental Legislation

A workshop on legislation relevant to marine and coastal environmental issues in the Red Sea and Gulf of Aden was held in Cairo, Egypt from 14-17 September 2003.

The workshop was attended by PERSGA staff as well as representatives from the countries of the region and specialized organizations.

PERSGA has been concerned with environmental legislation since it was founded. The first regional study on laws concerned with the protection of marine and coastal areas and fisheries was conducted in 1978 and a publication titled "Legislation Concerning the Coastal and Marine Environments in the Red Sea and Gulf of Aden 1985" was issued.

In 1994, another publication was jointly produced with UNEP titled "The Range of Legal Protection for the Environment of the Red Sea and Gulf of Aden. In 2002, PERSGA formed a specialized working group from the region in coordination with its Focal Points and under the leadership of regional consultants to collect and analyze relevant legislation.

During the 2003 Environmental Legislation workshop a legal report was finalized and will be distributed shortly. The study covers nine subject areas: Protection of the natural environment and combating pollution, navigation safety, national contingency planning, habitat and biodiversity conservation, living marine resources, integrated coastal zone management, marine protected areas, environmental databases, environmental education and public awareness.

DEMONSTRATION ACTIVITIES

RECENT PUBLICATIONS

PERSGA is pleased to announce the publication of three new issues in the Technical Series: No. 5 *Survey of Habitats in Djibouti and Plans for their Protection*, No. 6 *National Oil Spill Contingency Plan for Sudan*, and No 7 *Coral Reefs in the Red Sea and Gulf of Aden. Surveys 1990-2000: Summary and Recommendations*.

Number 5, *Survey of Habitats in Djibouti and Plans for their Protection*, provides a descriptive summary of an investigation on the status of reefs in the Republic of Djibouti in April 1998. It

covers sites on Iles Moucha and Maskali, Khor Ambado, Sable Blanc, the Djibouti city reefs, Isles des Sept Frères, Collines de Godoria, Khor Angar and Ras Siyyan. In total 181 sites were surveyed using a variety of techniques including rapid assessment and quadrat sampling. Results showed that many coral reefs are in good condition but there are signs of severe degradation at some sites. An Environmental Management Plan is proposed for consideration. The executive summary is given in French.

No. 6, *National Oil Spill Contingency Plan for Sudan*, is a document originally prepared by Haywood Environmental Ltd. under contract to PERSGA and in cooperation with the Sudanese government authorities. It includes the National Contingency Plan in both English and Arabic texts as well as an extensive discussion, with recommendations, on future methods for the protection of the marine environment of the Sudan from oil pollution.

No. 7, *Coral Reefs in the Red Sea and Gulf of Aden, Surveys 1990 to 2000* describes results of research carried out on coral reefs in the region over a ten year period. It describes the status of reefs, the major threats to coral reefs, national infrastructure, the status of legislation and recommendations for future reef conservation. The chapter on Djibouti is printed in both French and English. An executive summary is provided in Arabic.

LMR Sixth Working Group meeting

The Living Marine Resources Working Group met at PERSGA headquarters for their sixth meeting from 9-10 December, 2003.

Discussions revolved around the following:

- Achievements made during the SAP,
- Main constraints to the Programme,
- Mechanisms to ensure sustainability of achievements.

The following points were made:

- The regional training centres must maximize the contribution they can make in the provision of services to the PERSGA countries.
- Consultations could be held with governments to find means of improving fisheries laws and regulations in line with the strategies developed.
- The working group members are committed to train fish enumerators in their own countries on the installation and use of the LMR database.
- Work must continue on the regional Reference Collection Centre. This Centre should be available to visiting researchers and scientists from the region and loan specimens whenever necessary. Mechanisms must be designed for the sampling process and collection maintenance.
- Ornamental fish companies must be registered and certified by the Marine Aquarium Council to ensure appropriate production methods, and to improve holding facilities and management through the implementation of the recommended monitoring programme.
- Regional protocols and Memoranda of Understanding should be developed between PERSGA member countries to ensure the implementation of a sustainable management strategy for all living marine resources.

It was agreed that a coordination body should be formed for each of the following sub regions i.e.: Gulf of Suez; Gulf of Aqaba; Red Sea; Gulf of Aden. The main tasks of these coordination bodies would be to:

- Follow up on the achievements with emphasis on use of data
- Monitoring
- Revise the management plan when required
- Coordinate with other activities in the sub region such as tourism, oil industry and others to ensure integration of coastal zone management
- Design and implement public awareness programmes
- Suggest and implement research proposals

The working group members committed themselves to contact the concerned authorities in each member country to establish the necessary coordination bodies. Contact will be made with FAO GD through the Minister of Fisheries for Djibouti to accelerate the establishment of the Regional Committee for Fisheries in the Red Sea and Gulf of Aden (RECOFI).

Red Sea and Gulf of Aden Day Celebrations 26/10/2003

Consecutive campaigns were launched throughout PERSGA member states in the Region. Countries such as Djibouti, Somalia and Yemen, carried out celebrations to raise marine environmental awareness marking the Red Sea and Gulf of Aden Day on 26th September 2003. A variety of activities took place to celebrate the environmental day, which included, an environmental drama performance, a football tournament, a beach clean up, tree planting and school clean ups in solidarity with the events of the day.

Friday prayer in Somalia that day started with an environmental “speech” which was prepared and distributed to the mosques, this community support encouraged efforts in raising environmental awareness. 1000 tree seedlings were planted in Berbera as part of the celebrations on the Red Sea and Gulf of Aden Tree Planting campaigns.

A beach clean up campaign was carried out on September 27, 2003 in NW Somalia where almost 1500 people took part in this supportive environmental activity.

Exhibition at King Faisal Specialist Hospital and Research Centre – Jeddah

PERSGA was invited to participate in celebrations for the ‘International Week of Infection Control and Quality Improvement’ held at the King Faisal Specialist Hospital and Research Centre (KFSH&RC) from the 11th - 21st October 2003.

The celebration week was full of many activities. These included poster exhibitions and stalls, lectures and quiz shows, all focused on the themes of infection control, quality improvement and environmental protection.

Eleven stalls from different departments participated at the exhibition. The PERSGA display was advantageously situated at the very beginning of the hall and attracted many visitors, patients, and hospital staff. The items on display and the large posters had been assembled strategically to catch the eye and roused the admiration of the spectators.

Visitors enjoyed the PERSGA stall and put forward many questions about the marine environment. Many of them were divers enjoying the unique beauty of the Red Sea for recreation. The PERSGA video was one of the major highlights of the display; bystanders would gather around, keenly

interested to learn more about human impacts on the environment and the achievements carried out by PERSGA in the region.

A number of publications were given out; complimentary PERSGA pins and CD's were hot giveaways.

Flyers were distributed from the opening of the exhibition announcing an environmental lecture to celebrate 'Arab Environment Day'" on the 14th of October. This coincided with the 'Infection and Quality Control Week'. Dr. Dirar Nasr was the guest speaker for the lecture. He gave an enlightening presentation on the role of PERSGA and the importance of the variety of ecosystems and the many endemic species to be found in the Red Sea and Gulf of Aden.

PERSGA took the opportunity to raise its public profile and promote its message as a regional organization committed to promote conservation and wise use of coastal and marine environments.

PAC Press Release

The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) is pleased to announce the winners of the PERSGA Annual Students Competition for the year 2003.

The PERSGA's Annual Students Competition (PAC) is aimed to give students from the Region the opportunity to use their creativity and imagination for the benefits if their community and local environments. PERSGA was delighted with the high number of participants that sent in their beautiful contributions from all over the Region.

The theme of the competition of 2003 was directed toward "The Treasures of the Red Sea and Gulf of Aden" and how the students could express their care for the marine environment around them.

The PERSGA Annual Competition consisted of three independent sections:

Environmental Drawing Competition, ages 7-11 years

Environmental Article Competition, age 12-15 years.

Environmental Photography Competition, age 16-18 years.

Entrants placed first, second and third in each category of the competition will receive "valuable prizes", participation certificates and commemorative plaques.

PERSGA will also donate environmental books to the school of 1st prize winner from each category. These environmental books are the seeds for creating environmental awareness and raising the level of concern for future generation.

A grand total of 303 participants took part in the PAC for the year 2003. In the environmental drawing category a total of 200 contributions were received, for the environmental article category 97 articles/stories were received and for the environmental photography category a total of 20 images were received from all over the PERSGA region. The break down per country is as follows:

Country	Total Participants	Articles	Drawings	Photos
Djibouti	24	14	10	0
Egypt	73	20	47	6
Jordan	1	1	0	0

Saudi Arabia	20	5	15	0
Somalia	63	21	39	3
Sudan	85	19	66	0
Yemen	51	17	23	11
Total	317	97	200	20
Actual Participants	303			

PERSGA would like to congratulate all the students for sending in their artistic expressions and in particular like to thank the winners from each of the categories, the schools that participated in the competition and a special thanks to the schoolteachers that incorporated classes related to the PAC theme.

PERSGA would also like to encourage more students to participate in the upcoming PAC competition whose theme shall be focused on the “Threats of the Red Sea and Gulf of Aden”.

PERSGA Environmental Books for Children

A collaboration between PERSGA and Dar Al-Hadaeq has produced a series of books for children named “Murjan and Murjana”. The series is targeted at the 8-12 years age group, with a well-produced story line and colourful eye-catching illustrations. These books were produced through the SAP Public Awareness Programme, where PERSGA aims to raise marine environmental awareness in all sectors of the general public but with a special focus on the future generation. The first three books in the series have been received by PERSGA and sent out to Focal Points in the member countries. The Dar Al-Hadaeq publishing house will also arrange to make these books available on a commercial basis.

PAP Work Group Meeting

In the final stages of the implementation of The Strategic Action Programme, the Public Awareness and Participation Component PAP Working Group Held their final meeting in Jeddah 29-31 December 2003. The meeting’s Objectives were to Evaluate PAP activities over the last 3 years of the programme’s life, to Finalize Communication Manual and to Discuss Sustainability of PAP. The following PAP activities were discussed: Capacity Building, Environment Education, RSGA (Red Sea and Gulf of Aden) Day, Competition, Public Awareness Material, MERSA (The network of media representatives), CPP (Community Participation Projects). An overview of the activities took place discussing implementation process and current status as well as final outcome. A sustainability mechanism was agreed upon for each activity through maintenance of the networks formed and continued sharing of documents and news.

In the evaluation session during the meeting the working group members expressed how they learned and gained new skills and variable knowledge through working with PAP and the trainings received.

The workgroup members expressed their thanks to PERSGA and the implementing agencies for the opportunities which were provided by the SAP.

New Protected Area Legislation in Djibouti and the Declaration of the Iles des Sept Frères MPA

The official law on the declaration of Iles des Sept Frères MPA as well as other terrestrial and marine MPAs has been approved by the Council of Ministers of the Djiboutian government under the presidency of HE the Head of State of Djibouti, President Ismail Omar Guelleh. This excellent news is big step forward and a notable achievement for all who have worked so hard to establish the marine protected area network within the Red Sea and Gulf of Aden. Many people have contributed to this achievement. In particular we should mention the late Dr. Nizar Tawfiq Secretary General of PERSGA; Dr. Fared Krupp, initial CTA for the SAP; Mr. Mohammed Younis, SAP MPA Lead Specialist; the MPA Working Group members; and the National Programme Coordinator for Djibouti, Mr. Nasser Djama Abdi. A great debt is due to HE the Minister of Environment of Djibouti and his colleagues whose efforts created the momentum that pushed the project forward despite the many obstacles faced. Their input will be essential for implementing this new law for protected areas.

MPA Lead Specialist presents paper at the Vth World Parks Congress in South Africa.

During the Fifth IUCN World Parks Congress held in Durban, South Africa, the Marine Protected Areas Lead Specialist Mr. Mohammed Younis presented a paper and attended the Congress's symposia and workshops. The paper was titled "The Red Sea and Gulf of Aden Regional Network of Marine Protected Areas". The PowerPoint presentation was delivered during a cross cutting theme called 'Linkages in the Land and Seascape: Implementing MPA Networks to Sustain the World's Large Marine Ecosystems'. The objectives of the presentation were to highlight the role of PERSGA as a leading regional organization in the field of environmental conservation in the Red Sea and Gulf of Aden and to publicize its work to the global conservation community.

The Congress, which is only held once every ten years, has proven to be one of the most significant, recent, conservation events. Extending over a period of ten days it gave PERSGA the opportunity to raise awareness of the important conservation efforts taking place in this region and to expand its international exposure. Much was learnt from the numerous scientists and conservationists at the Congress. The different papers presented during the plenary, symposia and workshop sessions offered original and challenging ideas and contemporary information in the field of marine environmental science.

The World Parks Congress concluded with participants agreeing on new commitments and policy guidance for protected areas worldwide. Delegates departed with the Durban Accord, Action Plan and Recommendations, having had exciting new experiences and made valuable new contacts.

Three Regional Meetings to finalize three Regional Action Plans

During the month of September 2003, three very productive and important meetings took place for the HBC component to finalize three Regional Action Plan (RAP) documents. The documents in question are: The Regional Action Plan for the Conservation of Mangroves in the Red Sea and Gulf of Aden (meeting held 8-9 September), The Regional Action Plan for the Conservation of Breeding Seabirds in the Red Sea and Gulf of Aden (meeting held 23-24 September), and The Regional Action Plan for the Conservation of Marine Turtles in the Red Sea and Gulf of Aden (meeting held 29-30 September). These three RAP meetings took place in Jeddah and were attended by the regional representatives, the consultants, and the HBC regional working group members. All three

meetings proved to be great successes; suggestions and comments from the member countries will be incorporated into the final versions.

The RAP for Mangroves explains the vital role played by this habitat. It provides an essential and traditional source of fodder and firewood, the bark may be used for tanning and some fruits as fish poison but the ecological functions of the ecosystem far outweigh the consumptive uses.

Mangroves form an important buffer between the land and sea, trap sediments and protect shores from erosion. They provide food and shelter for large numbers of marine fish and shellfish, many being of significant commercial importance. The RAP for Turtles addresses the key issues that are important for the long term conservation of marine turtles and their habitats in our region, considering nesting and foraging sites and turtles migratory behaviour. The RAP for Seabirds, which was developed with assistance from BirdLife International, stresses their importance to the region as biological indicators and notes that the region is home to several endemic taxa including the White-eyed Gull (*Larus leucophthalmus*) and sub-species of the Red-billed Tropicbird (*Phaeton aethereus indicus*) and Brown Noddy (*Anous stolidus plumbeigularus*).

Each RAP document stresses the importance of these fragile habitats, the biodiversity within these marine ecosystems and their vital significance to the Red Sea and Gulf of Aden region. The three RAP documents are the result of four years of effort by the SAP HBC component and the regional specialists.

Activities of the Public Awareness and Participation Component

Three public awareness campaigns were organized by the Saudi Marine Scouts on the coast of the Jeddah Governorate.

Through the Strategic Action Programme Public Awareness component, PERSGA entered into an agreement with the Marine Scouts Organization to carry out several public awareness activities. The Marine Scouts are a youth group supervised by the Ministry of Education in the Kingdom of Saudi Arabia. The activities were designed to raise consciousness in visitors about the importance of conserving the marine environment and to raise the profile of PERSGA and its work within the Region.

The Saudi Marine Scouts Organization carried out three awareness campaigns on the coast of the Jeddah Governorate during their summer vacation in 1424 H. The first day of the campaign day was 10/5/1424 H, held under the sponsorship of HRH Prince Mishaal bin Majid bin Abdulaziz, Governor of Jeddah Governorate, at Al Nowras beach with the slogan "Demonstrating for the Marine Environment". The second campaign day was held on the 24/5/1424 H, this time under the sponsorship of HE Mr. Abdullah Al Mualami, Commissioner of Jeddah Governorate, at the Al Hamra Center (the Fountain). The third and final campaign day was held on 2/6/1424 H under the sponsorship of the Commissioner of the Ministry of Education in the Makkah Area, again at the Al Hamra Center but with the slogan "Marine Environmental Colours for Children". The campaign activities were covered by the local Saudi newspapers as part of the Jeddah Summer Festival 1423 H.

Following the great success achieved by the Marine Scouts Organization, PERSGA coordinated with the Presidency of Meteorology and Environment (Saudi Arabia) to obtain the approval of the Jeddah Governorate for the dedication of certain sections of the Jeddah coastline for the activities of the Marine Scouts, where they can perform their awareness campaigns on a regular basis. PERSGA will provide the necessary support at these sites.

The Scouts team responsible for carrying these activities was awarded second prize in the Ford Cars Agency Environmental Competition. The Awards ceremony was held in Dubai on October 15, 2003. The scout leader received the award in addition to a cash sum that will be used for raising awareness in the community of the importance of conservation of the environment of the Red Sea and Gulf of Aden.

MAIN ARTICLE

PERSGA- Strategic Action Programme from Vision to Success

It is universally perceived that ecological problems can "do in" developmental goals. The enhancement in welfare levels propelled by development may be jeopardized by the burdens imposed upon public health and standard of living by ecological deterioration. The threats posed by the continuous ecological deterioration in developing countries is no more a mere hypothetical argument, it is a reality. Moreover, it does not only jeopardize the safety of the contemporary generation but also that of future generation(s). The welfare of mankind and even its existence is risky if environmental protection and ecological security are not taken as essential and integral parts of the overall community security.

Compared to other global marine environments, the Red Sea & Gulf of Aden Region (PERSGA) is unique as it enjoys some sensitive and rare ecological systems including marine and coastal resources. The Red Sea is characterized by a wide range of coral reefs of different types. These coral reefs have peerless structural complexity worldwide. Indeed the extensive diversity of coral reefs in the Indian Ocean cannot be excelled anywhere else. The number of phyla that exist in the Red Sea only are far more than those found in other marine environments. This what made the Red Sea one of the most important global treasures of marine life varieties. The Red Sea embodies also a group of important coastal natural habitats.

Similarly, the Gulf of Aden - an arm of the Indian Ocean that is of less biological fame - is endowed with intensive piscine wealth of global importance. The Archipelago of Socotra encompasses a unique group of marine and land ecological systems and species (with a limited extent of impacts caused by human activities). Again, the rich cultural heritage of the Region - and particularly within the adjacent coastal area - includes a large number of historic and archaeological locations that are under the risks entailed by developmental pressures.

PROGRESSIVE RISKS:

Despite the fact that the Red Sea is one of the least ecologically deteriorated marine environments, compared to other closed regional waterways, yet it is under jeopardy of ever-growing risks. The Red Sea is subject to progressive dangers of marine pollution and ecological deterioration. These perils are resultant of the upward expansion of navigational activities, diversion of coastal natural habitats and areas to serve the purposes of urban and industrial development in addition to the fast growing tourism and entertainment activities. In the Gulf of Aden, the piscine resources are hardly hit by excessive exploitation. The environment and resources of RESEGAR suffer threats effectuated by an array of human and developmental activities. The rising rate of population and economic growth in the coastal areas of the Region led to increasing pressures upon the environment. These pressures are caused by many factors / doings such as removals, dumping, disposal of home, municipal and industrial wastes in addition to the unsustainable usage of fresh water resources. The main factor that underlies the growth lived by the Region and its resultant

impacts is attributable to the fast and progressive expansion in tourism development projects whereby marine resources are depleted unsustainably .

Besides ,the global importance of oil and the ensuing shipping activity in the Red Sea & Gulf of Aden pose significant dangers against the susceptible coastal and marine environs. Also, the routine leakages emanating from the oil production and carriage in the Gulf of Suez are yet another major source

of marine pollution in the Region. Meanwhile, the growing risks of incidents relating to oil transport entail a persistent need to emergencies. They also necessitate the availability of the required administrative and technical skills so as to minimize risks and control sizeable leakages . Issues of pertinence to emergencies should also be addressed on preventive basis.

These risks highlight the bad need to have effective policies on sound environmental management. However, most of the identified risks and adverse impacts can be avoided through the sound environmental management & planning, implementation of the ecological evaluation studies and adherence to ecological enactments most of which are currently in force .

THE MARINE SCIENCES PROGRAMME:

The Arab League Educational, Cultural and Scientific Organization (ALECSO) developed a programme on marine sciences in the Red Sea & Gulf of Aden. UNESCO helped with the development of the programme in the course of a forum that was held in Bremerhaven, Germany, in October 1974. Later on, this programme was named "The Red Sea & Gulf of Aden Environmental Programme". Within the context of many subsequent meetings, the basic regional concerns were identified. Under the patronage of ALECSO at its head office in Cairo, a tentative executive management was formulated to implement the programme. Thereafter, the First Experts' Meeting on the Regional Programme For The Red Sea & Gulf of Aden Ecological Studies was convened in Jeddah. A second conference was also held in Jeddah which ended up by signing the Second Jeddah Declaration of 1976. This declaration was concluded by the Arab countries bordering on the Red Sea & Gulf of Aden. These activities comprised the first phase of the programme which was geared on how to find a way for ecological preservation in the Red Sea & Gulf of Aden .

Within the framework of the next phase a meeting of legal and ecological experts from countries of the Region was held in Jeddah in 1981. This meeting adopted a new draft of a convention, a protocol for cooperation on prevention of oil pollution and an action plan to implement the convention. After that (1982), the Regional Commissioners Conference was held in Jeddah during which commissioners signed the action plan and also the Regional Agreement on Ecological Preservation in the Red Sea & Gulf of Aden and the protocol thereto. One of the most important achievements of the "Red Sea & Gulf of Aden Environmental Programme" was the drafting of a regional agreement. In February 1982, the draft agreement was ready to be signed by the delegates of the member states. This agreement was officially named "The Regional Agreement on Ecological Preservation in the Red Sea & Gulf of Aden" [better known as "The Jeddah Agreement"]. The delegates also signed the protocol on the Regional Cooperation on Emergency Management of Oil and Other Hazardous Materials Pollution. By the end of the year 1985, member states ratified the said instruments and the agreement entered into full force. Under the umbrella of the Arab League, the establishment of the "Regional Commission For The Preservation Of The Ecology Of The Red Sea & Gulf of Aden (PERSGA) was proclaimed during the first session of the PERSGA Board in Cairo in September 1995 .

PERSGA has a Board comprising of Ministers in charge of environmental affairs in member states. This Board is responsible for formulating and approving the general technical and financial policies. PERSGA has also a general secretariat to discharge day to day business. PERSGA membership includes the Hashmite Kingdom of Jordan, Republic of Djibouti, Kingdom of Saudi Arabia, Republic of Sudan, Democratic Republic of Somolia, Palestine, Egypt and Republic of Yemen. PERSGA is hosted by the Kingdom of Saudi Arabia with the head office in Jeddah. The member states contribute to the PERSGA budget while donor international organizations assist with the funding of some special regional programmes .

THE STRATEGIC ACTION PROGRAMME FOR THE RED SEA AND GULF OF ADEN

This programme is one of the most important projects that are set and executed by PERSGA. Some of the main objectives of this programme include the analysis / evaluation of the current affairs of the regional marine environment and the threatening human activities (e.g. pollution, development, depletion of resources,... ect). They also include the identifying of hot spots. The final programme instrument embodied national reports, recommendations on studied hot spots, priority procedures to be taken and the overall programme concept. As such, the Strategic Action Program is geared to provide a framework to facilitate continued cooperation with regard to the preservation and management of marine and coastal resources in the Region. This purpose is served through the development of remedial and preventive procedures to address current and future ecological issues. The development of this programme took three years (from inception in 1995 till ratification in 1998). The Strategic Action Programme (SAP) provides a framework and mechanism to tackle the management of the regional environment. This is achieved through a series of complimentary policies, institutional support and provision of required financing. SAP is based on a group of projects that are designed to address specific issues .

These points are executed on a short, medium and long term as commensurate with the nature of the problem / issue in question. SAP is updated regularly to reflect work progress with respect to implementation and to identify new measures to remedy emergent and / or expected issues .

Within the context of SAP, many major threats suffered by the coastal and marine environs and resources in RESEGAR are identified as under:

- *Unplanned coastal development
- *Extensive removals and dumping
- *Destruction of coral reefs
- *Destruction of mangroves
- *Destruction of vast areas of marine vegetation
- *Non-sustainable utilization of live marine resources
- *Excessive fishing to meet local and export demand
- *Illegal catching of sharks to meet demand on shark fins in the East Asian markets
- *Exploitation of turtles and egg collection.
- *Inadvertent entrapment of marine mammals in fishing nets

NAVIGATIONAL RISKS AND OIL PRODUCTION & SHIPMENT

- *Gross danger of ship collisions and stranding in the major navigational routes
- *Disposal of liquid ship wastes
- *Disposal of solid ship wastes

*Oil leakages following exploration, production and shipping operations

IMPACT OF URBAN & INDUSTRIAL DEVELOPMENTS

- *Extensive use of surface and ground water resources
- *Destruction of coastal and marine natural habitats during construction works
- *Disposal of untreated and / or partially treated sewage
- *Industrial pollution
- *Hazardous wastes
- *Disposal of cooling water
- *Disposal of oil wastes / discards

FAST EXPANSION OF COASTAL TOURISM

- *Depletion of surface and ground water
- *Destruction of marine and coastal natural habitats during construction works
- *Disposal of liquid and solid wastes without adequate treatment
- *Exposure of wild life and natural habitats to voluminous pressures by the tourists
- *Illegal collection of coral reefs and mollusca out of trading in gifts and artistic plaques

OTHER CONCERNS

- *illegal disposal of poisonous materials by foreign ships in the Gulf of Aden
- *Precipitates resulting from agricultural and pastoral activities in some areas
- *Hazards of pesticides and chemical fertilizers at some locations

EMERGENT / NEW ISSUES

- *Development of free zones
- *Uncontrolled expansion in small and medium sized industries
- *Exploitation of marine mineral resources
- *Piscine culture (shrimps and fish)
- *Collection of indoor aquarium fish

PROGRAMME ACTIVITIES

The SAP - Red Sea & Gulf of Aden comprises eight functions including:

- *Supporting Commission's capabilities and institutional back-ups to facilitate regional cooperation. (United Nations Environmental Program - UNEP (
- *Minimization of navigational risks and marine pollution (The World Bank(
- *Sustainable usage and management of live marine resources (United Nations Developmental Programme - UNEP (
- *Minimization of navigational risks and marine pollution (The World Bank(

- *Sustainable usages and management of live marine resources (United Nations Development Program - UNDP(
- *Preservation of natural habitats and biological diversity (UNDP(
- *Development of a Regional network of marine preserves (UNDP (
- *Supporting integrated management of coastal areas (The World Bank(
- *Enhancement of public awareness and contribution (UNDP(
- *Monitoring an assessment of programme shortfalls (UNDP (

INTEGRATED MANAGEMENT

The Commission extends support to a team of national experts from the Region. It also extends technical support through its contact points. Each programme function is administered by an action group headed by a leading specialist who is a native of the Region.

With respect to the navigational risks and marine pollution, the Red Sea and Gulf of Aden is an important waterway for shipping a high rate of world oil supplies. Of course, the construction of new navigational aides and the development of administrative regulations for ship passage in the South Red Sea will significantly minimize incidents and associated risks. Similarly, the enhancement of seaports with respect to waste collection facilities and augmentation of training on pollution fighting will provide additional benefits .

On the other hand, the galloping depletion of piscine resources coupled with both loss of the hatching, incubation and feeding methods and the irrational coastal development of live marine resources. To handle these problems, the programme will develop a management of live marine resources. To handle these problems, the programme will develop a management strategy for a number of targeted species. Simultaneously, plans were set to assess available fish, young sharks, king crabs and shrimps, improvement of fishery researches and training centres and the enhancement of the capabilities to enforce the applicable legislations .

The Regions is rich with natural habitats and biological diversity. The coastal systems such as mangroves, swamps, cliffy, sandy or mud shores lay side by side with shallow waters ,marine vegetations, coral reefs and / or deep waters. Again, large numbers of settler species are existing in the Region particularly in the coral reefs environment. As for the endangered species like turtles and dugongs, they are roving international boundaries in search of food and reproduction areas. Indeed, the enactment of legislations, administrative plans and international cooperation will help much to preserve these valuable resources.

Some international authorities recommend the dedication of some preserves will be havens for the endangered species and also permanent sources to supply young to areas suffering depletion.

In the course of developing this programme, member states participating in the SAP - Red Sea & Gulf of Aden unanimously agreed that most of the reasons underlying ecological problems in the Region are attributable to lack of integrated management at coastal areas. As such, it is a priority of SAP to improve and enhance the capabilities of member governments in this field. Thi will be in the form of a joint process that allows sharing and exchange of know-how and providing assistance to countries which lack plans for integrated management of coastal areas .

Besides, SAP does not overlook the need to expand participation to it. Accordingly, it is necessary to develop multi-level programmes for public awareness and participation. These multi fold

programmes target various society classes (fishermen, boat owners, touristic bodies, workers at seaports, ...etc) in addition to decision takers from village level to national level. It was taken into consideration to provide educational materials that concentrate on regional issues under discussion, documentaries and the Internet to complement the periodic newsletter published by PERSGA.

SOME SAP ACHIEVEMENTS OF PRESERVING THE ECOLOGY OF THE RED SEA & GULF OF ADEN

*Qualification of technical and administrative human cadres. During preparation of national reports it transpired that the available information on the marine and coastal environment and its resources and also that on specialized technical cadres are very few particularly in Djibouti, Somalia, Sudan and Yemen. Thus, there was concentration on selecting national coordinators for SAP in these countries. These coordinators are supplied with office equipment and transportation / communication means to facilitate coordination within these countries and with competent actions groups.

*Assessment of the status quo of marine mammals in the Region and materialization of sustainable usage of live and inorganic marine resources in Region.

*Undertaking hydrographic surveys in remote areas between Ban Al Mandeb and Hunaish Islands and consequently, publishing of new navigational maps in collaboration with both of the British Hydrographic Survey Office and the Inter-Government Maritime Consultative Organization in order to reduce navigational risks and marine pollution.

*In view of scarcity of statistical records on live marine resources, the Commission established two quazi-regional centres in each of Aden and Jeddah. These organs are dedicated for training on the different aspects of high-water fishing, the classification of sharks which are excessively fished in some countries, assessment of trade in indoor aquarium fish and the strive to establish a regional fisheries organization that will undertake the management and sustainable usage of live marine resources.

*Training of scientific cadres, who are natives of the Region, on surveying coral reefs, mangroves and marine vegetation. After the wide-spread of the coral reef's whitening in 1998, the Commission developed a regional action plan to preserve coral reefs, This action plan is within the context of the endeavours for the preservation of natural habitats and biological diversity.

*Development of a major regional plan for the management of marine preserves. This plan also encompass surveying potential / suggested preserves .

*Invitation with enhancing public awareness of the marine environment and coastal areas by publishing the commission's newsletter "Al Sanbouk" beside some introductory pamphlets on the commission itself and SAP. The efforts hereto do also include training teachers on non-curricula education and the formulation of ecological societies / clubs at schools.

*Contribution to the implementation of exemplary activities on the integrated management of coastal areas in Aden Province, Republic of Yemen. The implementation of these exemplary activities led to a plan proposal for integrated management of coastal areas in that Province. The commission also assisted the Republic of Sudan with developing its plan for the integrated management of coastal areas.

*The organization of many regional training workshops for the native scientists of the Region within the framework of the Programme's functions .

*Survey of natural habitats and development of relevant preservatives plans in each of Sudan and Djibouti.

*Execution of many regional workshops and training courses on the fields of assessment of ecological impacts, management of natural marine preserves, marine environment observation and control, integrated management of coastal areas and fighting marine oil pollution.

*Completion of proposed regional plan to preserve coral reefs in the Red Sea, Gulf of Aden and the Arabian Gulf. The plan proposal is drafted in collaboration with the EPO, the National Commission On the Preservation & Development Of Wild Life of the Kingdom of Saudi Arabia and the UNEP / ROWA. The proposal is an outcome of the 1998 phenomenon of coral reefs whitening. This phenomenon is a result to the loss of water moss that reciprocally live on coral reefs membranes. This phenomenon is also associated with the rise in water temperature and did afflict many coral reefs areas in the South Red Sea.

*Completion of the proposal of a regional protocol on the preservation of biological diversity and natural preserves in collaboration with the Ecological Preservation Organization Of The Gulf, UNEP / ROWA , GCC and with due support of the European Community.

*The Commission did also publish a number of scientific documents and publications on the preservation and maintenance of marine environments .

*Development / enhancement of joint work with NGOs, private sector and the general public.

*Development of the regional programme on ecological observation for the continuous appraisal on the ecological status in the Region and identification of any emergent change thereto.

*Implementation of the concepts of integrated management of coastal areas in the Region and continue helping member states with developing their respective local programmes and plans hereto.

*Formulation of a regional plan encompassing readiness and action to fight marine pollution caused by ships, continued assistance to member states with their national plans, establishment of a help exchange centre on marine emergencies in Al Ghardaga (Egypt) and the construction of a network of national and quazi-regional centres in RESEGAR .

Bountiful sea grasses under threat

They are the meadows of the sea, beautiful and bountiful but, hardly known and unappreciated, they face increasing threats.

They are the beds of sea grass which fringe many of the world's coastlines, providing rich feeding grounds and shelter for huge numbers of fish and other marine species, including some of the most endangered, such as dugongs and manatees, seahorses and green turtles.

The world's first survey of sea grasses shows 15 per cent of this unique marine ecosystem has been lost in the past decade and conservationists are hoping the findings will prompt Governments and policymakers to prevent further losses.

Seagrass beds are being destroyed by nutrient enrichment from human sewage, from heavy fishing activities, and even by yachting and jet-skiing, say the editors of the World Atlas of Seagrasses, produced by the

Cambridge-based World Conservation Monitoring Centre in conjunction with the United Nations Environment Programme.

Dr Ed Green of the centre and Professor Fred Short of the University of New Hampshire pointed out at the atlas launch last week that unlike coral reefs and mangrove swamps - two associated habitats which, in some cases, are protected - seagrass beds are largely taken for granted.

"Seagrasses are quite possibly the most widespread shallow marine ecosystems in the world, yet there are few

places where seagrass meadows are protected," Dr Green said.

The atlas, the work of more than 50 authors, estimates that the extent of seagrasses worldwide is 177,000sqm,

an area two-thirds the size of the UK.

It suggests seagrass meadows should be considered one of the most important marine ecosystems for humans,

playing a vital role in fisheries, protecting coral reefs by binding sediments, cleaning coastal waters and providing coastal defense from erosion.

They are just as important for wildlife, being key habitats for dugongs - the odd-looking sea cows once mistaken for mermaids.

The dugong is the best-known sirenian. Its relation, the manatee, has three species. All are threatened by habitat loss and the negative impacts of human population growth and development.

They are the only true herbivore marine mammals, and grazing on seagrass is essential for their survival.

Green turtles, one of the most endangered of the seven marine turtle species, are also highly seagrass-dependent.

Seagrasses are a mixed group of about 60 species of true flowering plants (not seaweed), which reproduce

sexually and produce pollen.

Thousands of other plant and marine animal species grow submerged in large meadows in both tropical and

temperate seas.

Every species has a 'barcode'-A new tool for taxonomists?

Written in the DNA of every animal is a unique barcode that could let taxonomists identify every animal on the planet with unprecedented ease. The barcode is written on a mitochondrial gene, which is found in all aerobic life, that codes for a protein called Cytochrome C Oxidase I. The new method should make life easier for scientists trying to assess biodiversity.

Conventional taxonomy has hit a bottleneck because it demands expert anatomical comparisons of complete animal specimens. It has taken 250 years to classify about one million animal species - about 10 per cent of the global total.

A workshop was convened at the Cold Spring Harbor Laboratory in New York State in 2003 after suggestions were made (*Proceedings of the Royal Society B*, vol. 270, p 313) that certain DNA sequences are as good as barcodes and would be a more practical way of identifying species.

Other groups already use extensive sequences of DNA to study broad relationships among animal groups, such as the "Tree of Life" programme begun last year (*New Scientist*, 9 November 2002, p 7). However, resolving deep relationships among the branches requires a lot of data.

The aim is to develop an analytical tool so powerful that with an afternoon's training, you could identify any species in the databank of barcodes. Cataloguing biodiversity in poorly studied regions is only one use for the barcode. Because DNA analysis requires only a few cells, a sample of undigested blood would be enough to identify the species a mosquito had fed on - a key issue with diseases like West Nile virus.

The gene scientists have homed in on resides in the mitochondria - the cell's energy source - which have only 13 protein-coding genes and no introns (stretches of DNA that don't appear to code for any proteins). That makes mitochondrial genes simpler to sequence than the far more abundant genes in the cell's nucleus. But only two of these genes are common throughout the animal kingdom - and the technology for sequencing *COI* - the *cytochrome C oxidase I* gene - is further advanced.

You can identify individual species with the barcode because DNA sequences in genes vary much more than the amino acid sequences in the proteins they code for. For example, human and chimpanzee versions of cytochrome C oxidase I differ by only one amino acid, but the DNA in the *COI* gene differs by 75 base pairs.

Name of Environmental Event	Venue	Date
World AIDS Day	Global	1st December

Using the DNA barcode technique, 500 different species of moths and butterflies have been identified, and there are plans to test another 500 by the end of the year. The making of a global inventory of animal life would cost up to \$2.5 billion - and take up to 20 years.

Sea Cucumbers in the Red Sea

Untrained divers are risking their lives for these cigar-shaped [invertebrate](#) animals. Not to save them, but instead to sell them! Today, the illegal harvesting and sale of sea cucumbers to hungry Asian markets is worth millions. Soon, it could kill the Red Sea coast.

They might appear as unnecessary or unimportant animals but they play a vital role in the marine ecosystem. Sea cucumbers also known as (*bêche-de-mer*) feed on decaying organic matter suspended in the water or buried in the sand. Related to sea urchins and starfishes, these "moving intestines" spend their life on the sea floor swallowing sand to feed on the buried organic matter. In this way they become nutrient recyclers. In essence, they do for the oceans what earthworms do for the land, turning over nearly 90 percent of the detritus on the sea floor. As they feed they churn up sediments allowing oxygen to enter for other bottom dwelling species. Their eggs, larvae, and juveniles are a source of food for other marine species, including fish, crustaceans, and molluscs.

The body of the sea cucumber is elongated, leathery and muscular; spines are contained within the skin. Surrounding the mouth are 8 to 30 tentacles. Five double rows of tube feet (with tiny suction cups) run along the body; they are used for crawling along the sea bed or anchoring to a rock. A sea cucumber breathes by pumping sea water in and out of an internal organ called a respiratory tree. They have no brain. The biggest sea cucumber, the 'tiger's tail' (*Holothuria thomasi*) is about 2 metres long, though most species are much smaller than this.

In other parts of the world, over-harvest of sea cucumbers has caused a dramatic hardening of the sea floor, eliminating habitat for other bottom-dwelling organisms.

And that's exactly what may be happening along the Red Sea coast, where illegal fishing has brought sea cucumbers (*khiyar el-bahr* in Arabic) to the brink of extinction.

"The fishermen have taken every last one," says one irate dive boat operator. "They didn't leave any behind. They cleared them all out."

While people from the Red Sea and Gulf of Aden region may cringe at the thought of touching these slimy creatures - let alone eating one - many Asians believe they have aphrodisiac properties and consider them a delicacy. The cucumbers are cooked, dried, and then used in soups and other dishes. Since the mid-1990s, Asian sea cucumber importers have set their sights on Egypt. In the early days the fishery went largely unnoticed because most sea cucumber collection was carried out on a small scale in remote locations. Fishermen simply waded out onto the shallow reef flats common to South Sinai and the southern Red Sea coast. Lagoons once carpeted with sea cucumbers were left bare, prompting fishermen to buy snorkeling gear and small boats to harvest the reefs.

Useful Internet Sites

<http://www.reefed.edu.au/>

<http://www.gbrmpa.gov.au/>

<http://www.arado.org.eg/>

<http://www.yemen-npa.org/>

<http://www.facingthefuture.org/>

<http://www.unep.ch/seas/>

www.persga.org

Event Calendar

The Environmental Technology Exhibition	Dubai	21 st -25 th February 2003
<u>Reef Check Training Course and Survey Expedition</u>	Thailand, Phuket	29 Feb- 12 March
<u>50th meeting of the CITES Standing Committee</u>	<u>Geneva,</u> <u>Switzerland</u>	15-19 March:2004
The 5th Global Civil Society Forum (GCSF)	Jeju, South Korea	27 - 28 March 2004
UNEP 2004 8 th Special Session of Governing Council/5 th Global Ministerial Environment Forum	Korea	29-31 March 2004
Foresight Flood and Coastal Defence conference at ICE	Institution of Civil Engineers London	of 27 April
A CIWEM Conference The Water Framework Directive: Integrating Approaches to Diffuse Pollution	<i>SOAS, London</i>	5 May 2004

